

Mnk2 (B-6): sc-271559

BACKGROUND

The MAPKAP (for MAP kinase activated protein) kinases are a group of MAP kinase substrates which are themselves kinases. In response to activation, the MAP kinases phosphorylate downstream components on a consensus Pro-X-Ser/Thr-Pro motif. Several kinases that contain this motif have been identified and serve as substrates for the ERK and p38 MAP kinases, including the serine/threonine kinases Rsk-1 (also designated MAPKAP kinase-1), Rsk-2 and Rsk-3, which are phosphorylated by ERK1 and ERK2. Similarly, p38 phosphorylates and activates the serine/threonine kinases MAPKAP kinase-2 and MAPKAP kinase-3 (also designated 3pK). The serine/threonine kinases Mnk1 and Mnk2 are substrates for both ERK and p38 MAP kinases. Mnk2 exists as multiple isoforms, including Mnk2a and Mnk2b, due to alternative splicing events.

REFERENCES

1. Sturgill, T.W., et al. 1988. Insulin-stimulated MAP2 kinase phosphorylates and activates ribosomal protein S6 kinase II. *Nature* 334: 715-718.
2. Stokoe, D., et al. 1992. MAPKAP kinase-2: a novel protein kinase activated by mitogen-activated protein kinase. *EMBO J.* 11: 3985-3994.
3. Davis, R.J. 1993. The mitogen-activated protein kinase signal transduction pathway. *J. Biol. Chem.* 268: 14553-14556.
4. Zhao, Y., et al. 1995. RSK3 encodes a novel pp90^{sk} isoform with a unique N-terminal sequence: growth factor stimulated kinase function and nuclear translocation. *Mol. Cell. Biol.* 15: 4353-4363.

CHROMOSOMAL LOCATION

Genetic locus: MKNK2 (human) mapping to 19p13.3; Mknk2 (mouse) mapping to 10 C1.

SOURCE

Mnk2 (B-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 3-34 at the N-terminus of Mnk2 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Mnk2 (B-6) is available conjugated to agarose (sc-271559 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271559 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271559 PE), fluorescein (sc-271559 FITC), Alexa Fluor® 488 (sc-271559 AF488), Alexa Fluor® 546 (sc-271559 AF546), Alexa Fluor® 594 (sc-271559 AF594) or Alexa Fluor® 647 (sc-271559 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271559 AF680) or Alexa Fluor® 790 (sc-271559 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271559 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

Mnk2 (B-6) is recommended for detection of Mnk2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

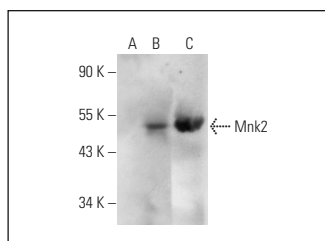
Suitable for use as control antibody for Mnk2 siRNA (h): sc-35951, Mnk2 siRNA (m): sc-35952, Mnk2 shRNA Plasmid (h): sc-35951-SH, Mnk2 shRNA Plasmid (m): sc-35952-SH, Mnk2 shRNA (h) Lentiviral Particles: sc-35951-V and Mnk2 shRNA (m) Lentiviral Particles: sc-35952-V.

Molecular Weight of Mnk2a: 52 kDa.

Molecular Weight of Mnk2b: 47 kDa.

Positive Controls: rat lung extract: sc-2396, HeLa whole cell lysate: sc-2200 or Mnk2 (h): 293T Lysate: sc-111551.

DATA



Mnk2 (B-6): sc-271559. Western blot analysis of Mnk2 expression in non-transfected 293T: sc-117752 (A), human Mnk2 transfected 293T: sc-111551 (B) and HeLa (C) whole cell lysates.

SELECT PRODUCT CITATIONS

1. El-Kadi, S.W., et al. 2018. Decreased abundance of eIF4F subunits predisposes low-birth-weight neonatal pigs to reduced muscle hypertrophy. *J. Appl. Physiol.* E-published.
2. Xie, S.J., et al. 2021. Dynamic m⁶A mRNA methylation reveals the role of METTL3/14-m⁶A-MNK2-ERK signaling axis in skeletal muscle differentiation and regeneration. *Front. Cell Dev. Biol.* 9: 744171.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.